



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,791	05/19/2000	Stephen G. Dick	1-2-136.1US	9656

24374 7590 06/30/2003

VOLPE AND KOENIG, P.C.  
DEPT. ICC  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

EXAMINER

NGUYEN, TOAN D

ART UNIT PAPER NUMBER

2665

DATE MAILED: 06/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/574,791	DICK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Toan D Nguyen	2665	

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 7 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7 line 9, it is unclear as to what is meant by "part time slots". The scope of the claim is, therefore, unascertainable. Similar problem exists in claim 20 line 8.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-6 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popovic' (U.S. Patent 6,567,482 B1) in view of Dahlman et al. (U.S. Patent 6,442,153 B1).

For claims 1-2 and 6, Popovic' discloses method and apparatus for efficient synchronization in spread spectrum communications, the method comprising:

transmitting from the user equipment an access data packet using a selected signature out of a set of signatures and in a time slot of a radio frame (figure 9, col. 13 lines 53-64);

identifying at a base station the selected signature, the transmission time slot and the transmission radio frame of the access data packet (figure 10, col. 14 lines 4-12);

determining at the base station an uplink scrambling code for the user equipment based on in part the identified signature, transmission time slot and transmission radio frame (figure 10, col. 14 lines 4-12); and

receiving the acknowledgment message at the user equipment and transmitting a subsequent data packet using the determined uplink scrambling code (col. 8 line 63 to col. 9 line 3).

However, Popovic' does not disclose:

selectively transmitting from the base station an acknowledgment message based on in part an availability of the determined uplink scrambling code.

In an analogous art, Dahlman et al. disclose:

selectively transmitting from the base station an acknowledgment message based on in part an availability of the determined uplink scrambling code (col. 6 line 50); wherein the random access channel is a common packet channel (figure 6, col. 4 lines 16-20 as set forth in claim 6).

One skilled in the art would have recognized an acknowledgment message to use the teachings of Dahlman et al. in the system of Popovic'. Therefore, it would have been obvious to

one of ordinary skill in the art at the time invention, to use the acknowledgment message as taught by Dahlman et al. in Popovic' system with the motivation being to ensure the correct mobile station receives the acknowledgment (col. 6 lines 47-52).

For claims 3-4, Popovic' discloses wherein the superframes have a set of 72 radio frames (col. 2 lines 31-36), each radio frame is divided into a set of eight time slots (col. 3 lines 33-35).

For claim 5, Popovic' discloses wherein the determined scrambling code is based on a function of the identified signature, transmission time slot and transmission radio frame (col. 13 lines 56-59).

For claims 14-15 and 19, Popovic' discloses method and apparatus for efficient synchronization in spread spectrum communications, the method comprising:

a user equipment having:

means for transmitting an access data packet using a selected signature out of a set of signatures and in a time slot of a radio frame (figure 9, col. 13 lines 53-64); and

means for receiving an acknowledgment message and transmitting a subsequent data packet using a determined uplink scrambling code (col. 8 line 63 to col. 9 line 3); and

a base station having:

means for identifying the selected signature, the transmission time slot and the transmission radio frame of the access data packet (figure 10, col. 14 lines 4-12);

means for determining the uplink scrambling code for the user equipment based on in part the identified signature, transmission time slot and transmission radio frame (figure 10, col. 14 lines 4-12).

However, Popovic' does not disclose:

means for selectively transmitting an acknowledgment message based on in part the identified signature, transmission time slot and transmission radio frame; and  
means for selectively transmitting an acknowledgment message based on in part an availability of the determined uplink scrambling code.

In an analogous art, Dahlman et al. disclose:

means for selectively transmitting an acknowledgment message based on in part the identified signature, transmission time slot and transmission radio frame (col. 6 line 50); and

means for selectively transmitting an acknowledgment message based on in part an availability of the determined uplink scrambling code (col. 6 line 50); wherein the random access channel is a common packet channel (figure 6, col. 4 lines 16-20 as set forth in claim 19).

One skilled in the art would have recognized an acknowledgment message to use the teachings of Dahlman et al. in the system of Popovic'. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the acknowledgment message as taught by Dahlman et al. in Popovic' system with the motivation being to ensure the correct mobile station receives the acknowledgment (col. 6 lines 47-52).

For claims 16-17, Popovic' discloses wherein the superframes have a set of 72 radio frames (col. 2 lines 31-36), each radio frame is divided into a set of eight time slots (col. 3 lines 33-35).

For claim 18, Popovic' discloses wherein the determined scrambling code is based on a function of the identified signature, transmission time slot and transmission radio frame (col. 13 lines 56-59).

5. Claims 7-13 and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popovic' (U.S. Patent 6,567,482 B1) in view of Nystrom et al. (U.S. Patent 6,526,091 B1).

For claims 7-10, 12, 21-22, 24-26 and 28, Popovic' discloses method and apparatus for efficient synchronization in spread spectrum communications, the method comprising:

defining a maximum number  $L$  of sequential time slots over which a specific data packet can be transmitted (col. 14 lines 7-9).

However, Popovic' does not disclose:

defining a set of  $N$  predetermined scrambling codes for the common packet channel where  $N > L$ ; and

defining an association of the scrambling codes based on in part time slots, such that when one of the scrambling codes is associated with a specific time slot, the next  $L$  time slots are associated with different scrambling codes.

In an analogous art, Nystrom et al. disclose:

defining a set of  $N$  predetermined scrambling codes for the common packet channel where  $N > L$  (col. 5 lines 51-58); and

defining an association of the scrambling codes based on in part time slots, such that when one of the scrambling codes is associated with a specific time slot, the next  $L$  timeslots are associated with different scrambling codes (figure 3, col. 5 lines 19-24 and col. 5 lines 51-62). Nystrom et al. disclose further the controller is used by a base station to assign uplink scrambling codes (figure 2, col. 1 lines 56-57 as set forth in claim 21); and the controller is used by a user equipment to determine a scrambling code for uplink communications (figure 2, col. 2 line 3 as set forth in claim 22).

One skilled in the art would have recognized predetermined scrambling codes to use the teachings of Nystrom et al. in the system of Popovic'. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the predetermined scrambling codes as taught by Nystrom et al. in Popovic's system with the motivation being to provide the remote terminal ascertain the small subset of all possible scrambling codes to which the BS scrambling code belongs (col. 5 lines 56-58).

For claim 11, Popovic' discloses wherein the set number of sequential radio frames is eight and the set number of time slots in each radio frame is eight (col. 3 lines 33-35).

For claim 13, the claim is directed to the same subject matter as in claim 6. Therefore, it is subject to the same rejection.

For claim 20, the claim is directed to the same subject matter as in claim 7. Therefore, it is subject to the same rejection.

For claim 23, the claim is directed to the same subject matter as in claim 6. Therefore, it is subject to the same rejection.

For claim 27, Popovic' discloses wherein the set number of sequential radio frames is eight and the set number of time slots in each radio frame is eight (col. 3 lines 33-35).

***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone numbers for the



Application/Control Number: 09/574,791

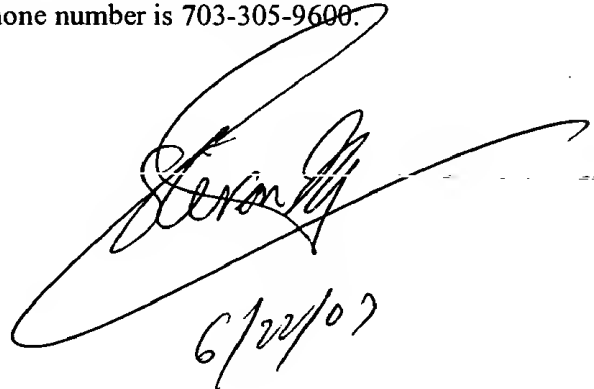
Page 8

Art Unit: 2665

organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

TN  
T.N.



6/22/07